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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,001	04/14/2004	A. Julie Kadashevich	303606.3004-100	5954

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EXAMINER

KAWSAR, ABDULLAH AL

ART UNIT	PAPER NUMBER
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2195

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/824,001	Applicant(s) KADASHEVICH, A. JULIE	
	Examiner ABDULLAH AL KAWSAR	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/14/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 18 and 19 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As per claim 18, claim language recites “computer program product having machine-readable instruction disposed” without having a storage device to store the program product and processor to execute, thus the claim is software per se, as they are not tangibly embodied on any sort of physical medium or hardware. Applicant is suggested to amend the claim including hardware such as “memory/storage device for storing” and “processor for executing” the software. Appropriate Correction required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. The following claims languages are not clearly understood:

- i. Claim 1, lines 1 recites “monitoring memory usage time by a software agent” (i.e. using software agent to monitor other process or monitoring memory usage of software agents on the system?), it is also unclear what is defined by a “software agent”(i.e. some specific process/ program/ thread?). Line 4 recites monitoring information “associated with said software agent” it is unclear what is meant by that (i.e. what type of information? The memory usage or other type?). Line 7 recites "identifying a process" it is unclear how the process is identified and based on what (i.e. is the process one of the task or part of the software agent. Line 7-8 it is unclear what is meant by “agent is operatively associated”, line 7, it is unclear whether “said system” and said agent” refer to “a computer system” and “a software agent” in line 1-2.
- ii. Claims 18 and 20 have similar deficiency as claim 1 above.
- iii. Claim 3, line 1 recites "process is identified" it is unclear how it is identified. Line 2 recites "non-http process" it is unclear what is meant by non-http process.
- iv. Claim 8, lines 1 recites "process is identified" it is unclear how it is identified(i.e. who identifies and based on what?). Line 1 also recites “HTTP process” it is unclear what is meant by http process.

Claim Rejections - 35 USC § 102

- 6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-12, 15, 16 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Ding et al.(Ding) US Patent No. 6691067.

8. As per claim 1, Ding teaches the invention as claimed including a method for monitoring memory usage by a software agent executing in a computer system (abstract, lines 6-10; col 6, lines 20-27), said method comprising:

starting a resource tracking function for monitoring information associated with said software agent in machine-executable code (col 6, lines 16-18);

creating a computer-readable data structure for storing information about said agent (col 9, lines 31-43);

identifying a process operating on said system and to which said agent is operatively associated (col 10, lines 36-45);

determining memory usage data for said agent (col 6, lines 20-27); and

storing said memory usage data in said data structure (col 7, lines 19-24).

9. As per claim 2, Ding teaches computer-readable data structure is a hash table (col 9, lines 31-43).

Art Unit: 2195

10. As per claim 3, Ding teaches process is identified as being a non-hypertext transport protocol (non-HTTP) process (col 10, lines 36-45).

11. As per claim 4, Ding teaches creating a thread list for monitoring threads associated with said agent (col 10, lines 43-45);

identifying at least one thread associated with said agent to produce at least one identified thread (col 10, lines 36-40);

adding said at least one identified thread to said thread list (col 10, lines 40-43);

determining a memory allocation associated with said at least one identified thread to produce at least one determined allocation for said at least one identified thread (col 13, lines 32-39; col 10, lines 20-26); and

computing a peak memory usage for said agent using said at least one determined allocation(col 10, lines 53-57; col 6, lines 20-27);

thereby monitoring memory usage by a software agent executing in a computer system having a non-HTTP process operating thereon (col 10, lines 36-45).

12. As per claim 5, Ding teaches comparing said peak usage for said agent to a plurality of peak usages associated with a like plurality of other agents executing in said system (co 10, lines 53-57).

13. As per claim 6, Ding teaches computing statistics on said agent and said plurality of other agents (col 10, lines 64-67 through col 11, lines 1-6); and

ranking said agent against said plurality of other agents based on said peak usage to produce a ranked list (col 10, lines 55-57).

14. As per claim 7, Ding teaches displaying said ranked list to a user (col 10, lines 53-67).

15. As per claim 8, Ding teaches said process is identified as being an HTTP process (col 8, lines 15-19).

16. As per claim 9, Ding teaches identifying HTTP threads operating in said system to produce identified threads, each of said identified threads further having one of a plurality of agent types associated therewith, at least one of said plurality of agent types including said agent, said agent capable of having agent threads associated therewith (col 8, lines 15-19; col 10, lines 18-28);

generating an agent thread list for facilitating identification of said plurality of agent types by storing information associated therewith (col 10, lines 26-33);

identifying which of said plurality of agent types is operating on each of said HTTP threads (col 10, lines 43-45);

associating those of said agent threads said agent is running on together to produce a related agent set (col 10, lines 47-53);

determining memory usage for each thread in said related agent set (col 13, lines 32-39; col 10, lines 20-26); and

combining said memory usage for each thread in said related agent set to produce a total memory consumption for said agent (col 10, lines 53-57; col 6, lines 20-27);

thereby monitoring memory usage by a software agent executing in a computer system having an HTTP process operating thereon (col 8, lines 15-19; col 10, lines 20-27).

17. As per claim 10, Ding teaches comparing said total memory consumption for said agent to a like plurality of total memory consumptions associated with others of said plurality of agents types (col 10, lines 53-55; col 6, lines 20-27).

18. As per claim 11, Ding teaches computing statistics on said total memory consumption for said agent and each one of said plurality of total memory consumptions(col 10, lines 64-67 through col 11, lines 1-6; col 6, lines 20-27); and

ranking said agent against said others of said plurality of agent types using said total memory consumption and said plurality of total memory consumptions, respectively, to produce a ranked list(col 10, lines 55-57).

19. As per claim 12, Ding teaches displaying said ranked list to a user (col 10, lines 53-67).

20. As per claim 15, Ding teaches data structure further includes information about a plurality of other software agents (col 7, lines 20-24).

21. As per claim 16, Ding teaches establishing a threshold for maximum memory usage (col 7, lines 42-45; col 6, lines 18-27).

22. As per claim 18, it has similar limitations as of claim 1 above. Therefore it is rejected under the same rational as of claims 1 above.

23. As per claim 19, Ding teaches instructions for storing memory usage information about a plurality of other software agents(col 7, lines 20-24);

instructions for processing said memory usage information associated with said agent and said memory usage information about said plurality of other software agents(col 10, lines 64-67 through col 11, lines 1-6); and

instructions for generating a rank order list including said information about said agent and said information about said plurality of other software agents (col 10, lines 55-57).

24. As per claim 20, it has similar limitations as of claim 1 above. Therefore it is rejected under the same rational as of claim 1 above.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ding et al.(Ding) US Patent No. 6691067, in view of Kirkpatrick et al.(Kirkpatrick) US Patent No. 6732359.

27. As per claim 13, Ding does not specifically disclose determining if said agent is running before determining said memory usage.

However , Kirkpatrick teaches determining if said agent is running before determining said memory usage (col 3, lines 43-46).

28. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Kirkpatrick into the method of Ding to verify if the process is running. The modification would have been obvious because one of the ordinary skills of the art would have verified the list of active process or application before monitoring any kind of activities on the system as the system performance would provide wrong results without knowing the actual list of process or application running on the system.

29. As per claim 14, Kirkpatrick teaches determining if said agent is expired(col 4, lines 21-29); and

processing said information if said agent is expired (col 4, lines 28-30).

30. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ding et al.(Ding) US Patent No. 6691067, in view of Mathur et al.(Mathur) US Patent No. 6938254.

31. As per claim 17, Mathur teaches terminating said software agent and those of said plurality of other software agents exceeding said threshold.

32. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Mathur into the method of Ding to terminate the application if it exceeds the memory usage threshold. The modification would have been obvious because one of the ordinary skills of the art would have implemented the threshold to be able to avoid system failure which will cause eventually if the application/process is not terminated when they exceed the threshold.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cui et al.(US Patent No. 7155715); Busuioc et al.(US Patent No. 6459683); Crow et al.(US Patent No. 6871345).

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ABDULLAH AL KAWSAR whose telephone number is (571)270-3169. The examiner can normally be reached on 7:30am to 5:00pm, EST.

Art Unit: 2195

35. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai T. An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

36. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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